

SENSOR ARRANGEMENT HAVING AN AIR INFLOW PATTERN FOR
PREVENTING DIRECT DEBRIS IMPACT

ABSTRACT

A temperature sensor arrangement (100, 300) includes a sensor cavity (150), a temperature sensing element (330) being positioned along a center line (140, 340) of the sensor cavity (150) and generating a signal indicating temperature of air flowing thereto, and a generally cylindrical outer casing (105, 305) surrounding the sensor cavity (150). In one embodiment, the outer casing (105) includes a pattern of flow passages (110) for allowing air flow to the temperature sensing element (330) in the sensor cavity (150), the flow passages (110) being angled such that there is no direct line of air flow from an exterior of the outer casing (105) to the sensing element (330). In another embodiment, the flow passages (310) are arranged in an offset pattern relative to a center line (340) of the housing cavity (150), such that there is no direct line of air flow from an exterior of the outer casing (305) to the sensing element (330).